

RESPIRATORY THERAPY

A student who has completed the Job Corps Respiratory Therapy program is equipped with the skills to contribute to the workplace as a valued employee from day one. Competence in academic and vocational skills is required for graduation. In addition, Job Corps students learn employability and technological skills. To complete his or her Respiratory Therapy, a student must master skills in these categories:

CORE REQUIREMENTS

Understand the following: gases of the atmosphere, concentration of gases, partial pressure of gases and barometric pressure; understand the following as it relates to cylinders: color code of cylinders, shoulder markings, safety valve, index system, storage content and transportation of cylinders; understand the following about piping systems: index pressure, gases of pressure system, zone values, bulk systems; explain the gases and regulation of devices and blenders; understand the cardiovascular system, respiratory system, blood gases, pathophysiology of the respiratory system, pharmacology, respiratory physiotherapy, nursing arts, legal aspects and professional ethics; understand the following as it relates to respiratory system: anatomy and physiology, pulmonary functions, compliance and resistance and hypoxia and hypercapnia.

FUNDAMENTALS OF RESPIRATORY THERAPY

Explain the history of respiratory therapy; understand the humidity, humidification devices and aerosol therapy as it relates to relative humidity, absolute humidity, humidity deficits, humidifiers, nebulizers and aerosol therapy; in regards to oxygen therapy, understand mask therapy, nasal catheter, nasal cannula, tents and croupettes, isolettes and CPAP/EPAP; explain and identify the following: Wright respirometer, McKesson vitalor, dragger, Wright peak flow meter, Bourns LS/75; identify and describe the following as it relates to oxygen analyzers: paramagnetic, wheatstone bridge, polarographic, galvanic; define and identify the following as it relates to sterilization: chemical, steam, ethylene oxide, convection and pasteurization; explain adjunctive therapy, including incentive spirometry, indications, contraindications, hazards, blow bottles and CO₂ rebreathing devices; explain the purpose of mechanical ventilation; identify and describe pressure ventilators, volume ventilators and understand the components on a Monaghan 22S, SIMV and OHIO560.

RESPIRATORY THERAPY DUTIES

Demonstrate the techniques of airway management including oxygen administration, use of adjuncts (demand valve), suctioning (use of nebulizers), direct laryngoscope, endotracheal intubations, esophageal obturator, chest decompression, cricothyrotomy, Tran tracheal set insufflations, Heimlich maneuver and respiratory physiotherapy; demonstrate the following oxygen therapy: select appropriate face mask and proper application, connect humidifying device, adjust proper flow rate; demonstrate the following: selection of appropriate size nasal catheter and nasal cannula, lubrication of catheter, connection of catheter and cannula to humidifying device, insertion and anchoring and adjustment for proper flow rates, how to connect tent/croupette to flow-regulating device, adjust proper flow rate, adjust for appropriate temperature and proper application; locate and explain the following information in the medical record: ABG's/Oximetry data, history and physical exam, respiratory charting and physician's orders; explain and demonstrate the following: cannula, air entrapment mask, pneumatic nebulizers, non-rebreathing mask, infection control aspects of oxygen therapy, T-piece, trach masks, transtracheal oxygen "Scoop Catheter"; explain the effects of pulse oximetry monitoring in adults; explain and identify absorption atelectasis, oxygen-induced hypoventilation, retrolental fibroplasia, and bronchopulmonary dysplasia; explain home care oxygen therapy.

CALCULATIONS

Explain and demonstrate calculations for oxygen content, oxygen transport, percent shunt and atmosphere oxygen tension.